

Soft magnetic

SATIMPHY

SATIMPHY is an iron-nickel soft magnetic alloy suitable for tape wound cores used in residual current devices, transformers...

International standards

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Chemical composition

Elements (% weight)	Ni	Fe
Typical value	56	Bal

Physical properties

Density (g/cm ³)	Melting T° (°C - °F)	Curie T° (°C - °F)	Thermal expansion (10 ⁻⁶ .°K ⁻¹)	Resistivity (μΩcm)	Thermal conduction (W/°Km)	Specific heat (J.Kg ⁻¹ .°K ⁻¹)
8.3	1445 - 2633	530 - 986	10.7	45	16.5	-

Magnetic properties*

Conditions	Thickness (mm - ")	Permeability (at 5 mOe ≈ 0.4 A/m)	Maximum permeability
AC 50Hz	0.080 - 0.00315	70000	140000

* Typical values measured on wound cores 30 x 20 x 10 x th. 0.08mm / 0.00315» after heat treatment at 1170°C / 2138°F in pure & dry Hydrogen after proper cooling plus baking at optimum temperature in magnetic field

Mechanical properties*

Temper	Hardness Hv	Grain size	Tensile strength (MPa - KSI)	Yield strength (MPa - KSI)	Elongation %	Young's modulus (MPa - KSI)
Hard	260	-	-	-	-	-

* Typical values for material to be tested in accordance with NF EN 10002, NF EN ISO 6507, NFA 04102

Standard delivery & dimensions available

Form	Coil
Thickness (mm / ")*	0.05 to 0.10 / .00197 to .00394
Width (mm / ")	10 to 300 / .394 to 11.81
Temper	Hard

* 0.08mm / 0.00315" thickness is commonly produced

Available Forms

SATIMPHY is delivered in cold rolled strip. Contact us for other specific formats.

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The data enclosed in this document are given as indicative values and correspond to our standard product. Different specific requirements are subject to discussion and formal approval by Aperam Alloys Imphy. For further information or special request, please contact us.



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